

REMARKS

Claims 1, 5, 14, and 16-18 have been amended. Support for the proposed amendments may be found at least between line 7 on page 8 and line 29 on page 9 of the Patent Application. No new matter has been added. Claims 3-4 have been canceled. Pursuant to these amendments, claims 1-2 and 5-24 are pending in the present application.

In the Office Action, claims 1-24 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Cho, et al (U.S. Patent Application Publication No. 2003/0063587) in view of Malladi, et al. (U.S. Patent Application Publication No. 2003/0210668). Claims 3-4 have been canceled, rendering the Examiner's rejection of these claims moot. The Examiner's remaining rejections are respectfully traversed.

A finding of obviousness under 35 U.S.C. § 103 requires a determination of the scope and content of the prior art, the level of ordinary skill in the art, the differences between the claimed subject matter and the prior art, and whether the differences are such that the subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made. *Graham v. John Deere Co.*, 148 USPQ 459 (U.S. S.Ct. 1966). To determine whether the subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made, one should determine whether the prior art reference (or references when combined) teach or suggest all the claim limitations. Furthermore, it is necessary for the Examiner to identify the reason why a person of ordinary skill in the art would have combined the prior art references in the manner set forth in the claims.

Conventional power control techniques may introduce unwanted errors into communications in a wireless system. These errors in power control may arise from inaccurate estimates of the channel quality due to measurement errors and command signal (e.g., TPC)

transmission errors. Channel quality may vary at a faster rate as the speed of the wireless unit increases. Therefore, at higher mobile speeds, the power control process may be unable to accurately track the channel quality, thereby resulting undesirable inefficient use of the radio resources. See Patent Application, pg. 3, l. 22 – pg. 4, l. 6.

At least in part to increase system capacity for real-time and/or circuit switched services, while reducing unwanted errors introduced by means of power control, independent claim 1 sets forth transmitting a first sub-frame associated with a first frame using a first wireless resource. If an acknowledgement message associated with the first sub-frame is received, claim 1 sets forth transmitting a first sub-frame associated with a second frame using the first wireless resource and a second wireless resource. If a non-acknowledgement message associated with the first sub-frame is received, claim 1 sets forth transmitting a second sub-frame associated with the first frame using the first wireless resource and transmitting the first sub-frame associated with the second frame using the second wireless resource. Independent claim 14 sets forth transmitting an acknowledgement message or a non-acknowledgement message indicating whether a first sub-frame associated with a first frame was received using a first wireless resource. Claim 14 also sets forth receiving a first sub-frame associated with a second frame using the first wireless resource and a second wireless resource if an acknowledgement message is transmitted. If a non-acknowledgement message is transmitted, claim 14 sets forth receiving a second sub-frame associated with the first frame using the first wireless resource and receiving the first subframe associated with the second frame using the second wireless resource.

Cho describes techniques for selecting a modulation and coding scheme (MCS) for wireless transmissions. For example, Cho describes a level selection controller 66 that stores information indicating seven MCS levels that are grouped into three MCS groups. One MCS

level is chosen for transmission over a channel using information on the quality of the channel. When acknowledgment (ACK) signals are received over a feedback channel 72, then the MCS level may be raised by one level. The MCS level may be decreased when negative acknowledgment (NACK) signals are received. See Cho, paragraphs [0045-0046]. However, only one MCS level is ever used for transmitting information to the receiver 80. Furthermore, Cho doesn't describe or suggest any techniques for partitioning and/or sharing resources between subframes associated with different frames depending on whether or not each frame has been successfully received. Consequently, Applicants respectfully submit that Cho fails to describe or suggest transmitting any information using first and second wireless resources and, in particular, Cho fails to describe or suggest transmitting sub-frames associated with a second frame using the first and the second wireless resource when an acknowledgment message associated with a first frame is received, as set forth in independent claims 1 and 14.

Claims 5 and 18 depend from independent claims 1 and 14, respectively, and further set forth transmitting at least another subframe of the first frame using the first wireless resource concurrently with at least one subframe from the second frame transmitted using the second wireless resource in response to receiving a non-acknowledgment message associated with the first frame. As discussed above, Cho only describes selecting MCS levels for transmissions and is completely silent with regard to concurrently transmitting different subframes using different wireless resources. Consequently, Applicants respectfully submit that Cho also fails to teach or suggest transmitting at least another subframe of the first frame using the first wireless resource concurrently with at least one subframe from the second frame transmitted using the second wireless resource, as set forth in claims 5 and 18.

The Examiner acknowledges that Cho is completely silent with regard to transmitting sub-frames over an air interface. Consequently, the Examiner relies upon Malladi to describe the use of sub-frames. However, Applicants respectfully submit that Malladi fails to remedy the fundamental deficiencies of Cho. In particular, Applicants respectfully submit that Malladi fails to teach or suggest transmitting any information using first and/or second wireless resources depending on whether an acknowledgement or non-acknowledgement message is received. For at least the aforementioned reasons, Applicants respectfully submit that the cited references fail to teach or suggest all the limitations set forth in independent claims 1 and 14. Applicants further submit that the Examiner has not provided any reason why a person of ordinary skill in the art would be motivated to modify the cited references to include transmitting information using first and second wireless resources depending on whether an acknowledgement or non-acknowledgement message is received.

For at least the aforementioned reasons, Applicants respectfully submit that the invention set forth in the amended claims would not have been obvious over Cho and Malladi, either alone or in combination. Applicants respectfully request that the Examiner's rejections of claims 1-24 under 35 U.S.C. § 103(a) be withdrawn.

For the aforementioned reasons, it is respectfully submitted that all claims pending in the present application are in condition for allowance. The Examiner is invited to contact the undersigned at (713) 934-4052 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,

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